

WHAT IS CLAIMED:

1       1. A RF test interconnection system for connecting a  
2 measurement device to a device under test, said system  
3 comprising:

4       a probe card having a probe extending from a first side of  
5       said probe card for making electrical contact with said  
6       device under test and a probe card coaxial connector  
7       extending from a second side of said probe card, said  
8       probe and said probe card coaxial connector being in  
9       electrical communication;

10      a test head having a test head coaxial connector adapted to  
11       mate with said probe card coaxial connector when said  
12       probe card and said test head are urged together, said  
13       test head coaxial connector being connectable to said  
14       measurement device; and

15      a de-mating device attached to one of said probe card and  
16       said test head for urging said probe card and said test  
17       head apart by applying a separating force therebetween,  
18       said probe card and said test card coaxial connectors  
19       being electrically connected when said test head and  
20       said probe card are urged together by a connection  
21       force and electrically disconnected when said  
22       connection force is removed.

1       2. A system according to claim 1, wherein said de-mating  
2       device is a spring-loaded plunger.

1       3. A system according to claim 1, wherein said de-mating  
2       device is attached to said test head.

1       4. A system according to claim 1, wherein said probe card  
2 coaxial connector includes a female inner receptacle and a female  
3 outer barrel and said test head coaxial connector includes a male  
4 center pin and a male outer barrel, said receptacle and pin  
5 slidingly mating when said probe card and test head are urged  
6 together and said male and female barrels slidingly mating when  
7 said probe card and said test head are urged together.

1       5. A system according to claim 1, wherein said coaxial  
2 connectors include a compression member that maintains  
3 compressive contact between the connectors when said probe card  
4 and said test head are urged together.

1       6. A system according to claim 1, further comprising  
2 tapering male extensions cooperating with female receptors to  
3 assist in aligning said connectors.

1       7. A system according to claim 1, further comprising  
2 tapering female receptors cooperating with male extensions to  
3 align said connectors.

1       8. A RF test interconnection system for connecting a  
2 measurement device to a device under test, said system  
3 comprising:

4       a probe card having a probe extending from a first side of  
5 said probe card for making electrical contact with said  
6 device under test and a probe card coaxial connector  
7 extending from a second side of said probe card, said  
8 probe and said probe card coaxial connector being in  
9 electrical communication and said probe card coaxial

1                   connector includes a female inner receptacle and a  
2                   female outer barrel;

3                   a test head having a test head coaxial connector adapted to  
4                   mate with said probe card coaxial connector when said  
5                   probe card and said test head are urged together, said  
6                   test head coaxial connector being connectable to said  
7                   measurement device and said test head coaxial connector  
8                   includes a male center pin and a male outer barrel; and

9                   a spring-loaded plunger attached to one of said probe card  
10                  and said test head for urging said probe card and said  
11                  test head apart by applying a separating force  
12                  therebetween, said probe card and said test card  
13                  coaxial connectors being electrically connected when  
14                  said test head and said probe card are urged together  
15                  by a connection force and electrically disconnected  
16                  when said connection force is removed, wherein said  
17                  receptacle and pin slidably mate when said probe card  
18                  and test head are urged together and said male and  
19                  female barrels slidably mate when said probe card and  
20                  said test head are urged together.

1                   9. A system according to claim 8, wherein said plunger is  
2                  attached to said test head.

1                   10. A system according to claim 8, wherein said coaxial  
2                  connectors include a compression member that maintains  
3                  compressive contact between the connectors when said probe card  
4                  and said test head are urged together.

1           11. A system according to claim 8, further comprising  
2           tapering male extensions cooperating with female receptors to  
3           align said connectors.

1           12. A system according to claim 8, further comprising  
2           tapering female receptors cooperating with male extensions to  
3           align said connectors.